



PATENT
ATTORNEY DOCKET NO.: GEL-US
CUSTOMER NO: 36038

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:)
Jiacheng Yang)
Serial No. 10/034,727) Group Art Unit:
Filed: 12/26/2001) Examiner:
For: **Directed Assembly of Functional**)
Heterostructures)

Commissioner for Patents
PO Box 1450
Alexandria VA 22313-1450

Dear Sir:

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), applicants submit the documents listed on the attached PTO 1449. This Information Disclosure Statement is being filed (as checked below):

☐ within three months of the filing date of the above-referenced application

☐ within three months of the date of entry of the national stage in a § 371 application; or

☒ before the mailing of a first Office Action on the merits for the above-referenced application.

Copies of the listed documents, other than the listed U.S. Patents, are attached.

Applicants respectfully request that the Examiner consider the listed documents and

indicate that they were considered by making appropriate notations on the attached PTO 1449 form.

N/A: English translations of the non-English documents are attached.

___ The following is a concise statement of the relevance of the non-English language documents.

___ In lieu of a statement of relevance or translation of the non-English language documents, an English language version of a search report from a foreign patent office in a corresponding application citing these documents and setting forth the relevance thereof is enclosed.

This submission does not represent that: (i) Applicant has read or analyzed any of the documents cited herein, except as otherwise provided; (ii) a search has been conducted; (iii) that no other documents exist which may be material to the examination of this application exist; or (iv) that any of the listed documents, or any part thereof, are material or constitute prior art under title 35 of the United States Code. Applicant reserves the right to present evidence and arguments to counter an assertion that any such documents are prior art, and/or to establish the patentability of the claimed invention.

Respectfully Submitted,

BY: 

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Applicants) hereby petitions for any extension of time or for any other grounds needed to make this submission timely and proper. The Commissioner is hereby authorized to charge any fees due in connection with this submission and not otherwise covered by payment included herewith, or to credit any overpayment, to Deposit Account No. 502088.

I hereby certify that, on the date indicated below, this correspondence and all attachments indicated herein are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, PO Box 1450, Alexandria VA 22313-1450

By: 

Date: 12/12/03

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/20023

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 21/00, 27/26, 33/53, 33/543, 33/553; C12P 19/34

US CL : 435/4, 6, 7.1, 7.92, 287.1-288.7; 436/164, 172, 518-532; 422/50, 68.1, 82.01; 204/400, 414-418

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/4, 6, 7/1, 7.92, 287.1-288.7; 436/164, 172, 518-532422/50, 68.1, 82.01; 204/400, 414-418

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Derwent, STN

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST, STN

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	WO 01/098765 A1 (BIOARRAY SOLUTIONS, LTD.) 27 December 2001 (27.12.2001), whole document.	1-101
Y,T	US 2002/0166766 A1 (SEUL et al) 14 November 2002 (14.11.2002), whole document.	1-101
X,T	US 2003/0082587 A1 (SEUL et al) 01 May 2003 (01.05.2003), whole document.	1-101
A,P	US 6,251,691 B1 (SEUL) 26 June 2001 (26.06.2001), whole document.	1-101
A	US 5,770,721 A (ERSHOV et al) 23 June 1998 (23.06.1998), whole document.	1-101
A	WO 97/40385 A1 (SEUL) 30 October 1997 (30.10.1997), whole document.	1-101

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

05 August 2003 (05.08.2003)

Date of mailing of the international search report

10 SEP 2003

Name and mailing address of the ISA/US

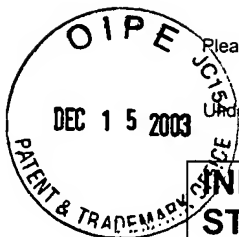
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PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

SHEET OF

Complete if Known

Application Number: 10/034,727

Filing Date: 12/26/2001

First Named Inventor: M. Seul, et al.

Group Art Unit:

Examiner Name:

Attorney Docket Number: GEL

Examin er Initials	U.S. Documents		U.S. Patent Document Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
	Number			
	US 2002/0166766 A1		Seul et al.	11/14/2002
	US 2003/0082587 A1		Seul et al.	5/1/2003
	US 6,251,691 B1		Seul	6/26/2001
	5,770,721		Ershov et al.	7/23/1998

FOREIGN DOCUMENTS

Examiner Initials	Foreign Patent Documents			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Translation
	Office	Number	Kind Code (if known)			
		WO 01/98765 A1		BioArray Solutions	12/27/2001	
		WO 97/40385 A1		Seul	10/30/1997	

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s),	T 2
		Y. IWAYAMA, et al. "Optically Tunable Gelled Photonic Crystal Covering Almost the Entire Visible Light Wavelength Region." Langmuir, 2002.	
		S.R. Dziennik, et al. "Nondiffusive mechanisms enhance protein uptake rates in ion exchange particles." PNAS, 2003: 420-425. Vol. 100, No. 2.	
		A. HATCH, et al. "Diffusion Immunoassay in Polyacrylamide Hydrogels." Micro Total Analysis Systems, 2001: 571-572.	
		N. FATIN-ROUGE, et al. "Diffusion and Partitioning of Solutes in Agarose Hydrogels: The Relative Influence of Electrostatic and Specific Interactions". J. Phys. Chem. B., 2003: 12126-12137. Vol. 107.	
		P. KRISO et al. "Electron-Beam Surface-Patterned Poly(ethylene glycol) Microhydrogels". Langmuir, 2003: 5618-5625. Vol. 19.	
		P. GHOSH, et al. "A Simple Lithographic Approach for Preparing Patterned, Micron-Scale Corrals for Controlling Cell Growth." Angew. Chem. Int. Ed., 1999: 1592-1595. Vol. 38, No.11.	
		W-G. KOH, et al. "Poly(ethylene glycol) Hydrogel Microstructures Encapsulating Living Cells." Langmuir, 2002: 2459-2462. Vol. 18.	
		W-G. KOH, et al. "Molding of Hydrogel Microstructures to Create Multiphenotype Cell Microarrays." Analytical Chemistry, 2003.	
		C. BANDEIRA-MELO et al. "EliCell: a gel-phase dual antibody capture and detection assay to measure cytokine release from eosinophils." Journal of Immunological Methods, 2000: 105-115. Vol. 244.	
		One Cell Systems Product Information. http://www.onecell.com/AboutUs.htm	
		Sentek Group, Inc. Product Information. http://www.sentekgroup.com/glucoview.htm	
Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.